

What Is Claimed Is:

1. A process for synthesizing substantially enantiomerically pure 4-methylene-L-glutamic acid and analogs thereof, said process comprising the steps of:
 - 5 a. providing a (2S)-pyroglutamic acid or a derivative thereof as a starting material;
 - b. converting the starting material to a 4-enamine derivative thereof;
 - c. hydrolyzing the 4-enamine derivative to a 4-hydroxymethylidene derivative thereof; and
 - d. reducing the 4-hydroxymethylidene derivative to a 4-methylene derivative of pyroglutamic acid or an ester thereof;
 - e. reacting the 4-methylene pyroglutamic acid with a strong base to form linear 4-methylene glutamic acid, or esters and salts thereof.
- 10
2. The process of Claim 1 wherein step b includes reacting the starting material with an amide or an acetal.
- 15
3. The process of Claim 2 wherein step b includes reacting the starting material with an acetal at a temperature ranging from 70 °C to 130 °C.
4. The process of Claim 1 wherein step c includes reacting the 4-enamine derivative with a strong acid.
- 20
5. The process of Claim 1 wherein step d includes reacting the 4-hydroxymethylidene derivative with a carbonate salt.
6. The process of Claim 1 wherein the strong base is lithium hydroxide.
7. The process of Claim 3 wherein the temperature ranges is from 105 °C to 115 °C.